

NEW YORK STOCK EXCHANGE

Strategic Evaluation of Generation Options for SMU/NAPE

Assessing Build, Buy, and Co-Location Models for Long-Term Reliability & Growth

Team Members
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Intro to Business

Business: Power generation developer/operator.

Clients: Hyperscalers (AI, cloud), data centers.

Current Situation And Challenges

Demand outpacing grid growth

Policy & decarbonization pressure

Capital & execution constraints



In consideration of Market Competition & Financial Situation

Build

Economic profile

- 550 MW CCGT using case Excel assumptions
- CF ~60% → ~2.89 TWh/yr (capacity × CF × 8,760)
- Gas = 40–45% of U.S. generation; backbone dispatchable fuel

Capex & returns

- Capex = \$1,150/kW → ~\$633M
- Merchant PJM pricing volatile; capacity auctions uncertain
- Returns depend on securing long-term contracts

Competitive positioning

- Meets dispatchable needs, but weaker ESG vs nuclear/renewables
- AI firms increasingly pursuing low-carbon power partnerships



In consideration of
Market Competition &
Financial Situation

Buy

Immediate capacity & cash flow

- Acquire existing 550 MW CCGT (~\$450M modeled)
- CF ~70% → ~3.37 TWh/yr, no construction delay

Asset & carbon risk

- Older units → efficiency decay; higher O&M
- Gas = ~875 lb/MWh CO₂ → policy exposure
- LNG export growth → greater gas price volatility

Strategic fit

- Fastest capacity addition but non-scalable
- Nuclear (18–20% of U.S. supply) grows mainly through life extensions, limiting acquisition supply



In consideration of
Market Competition &
Financial Situation

Partner

Economic strength

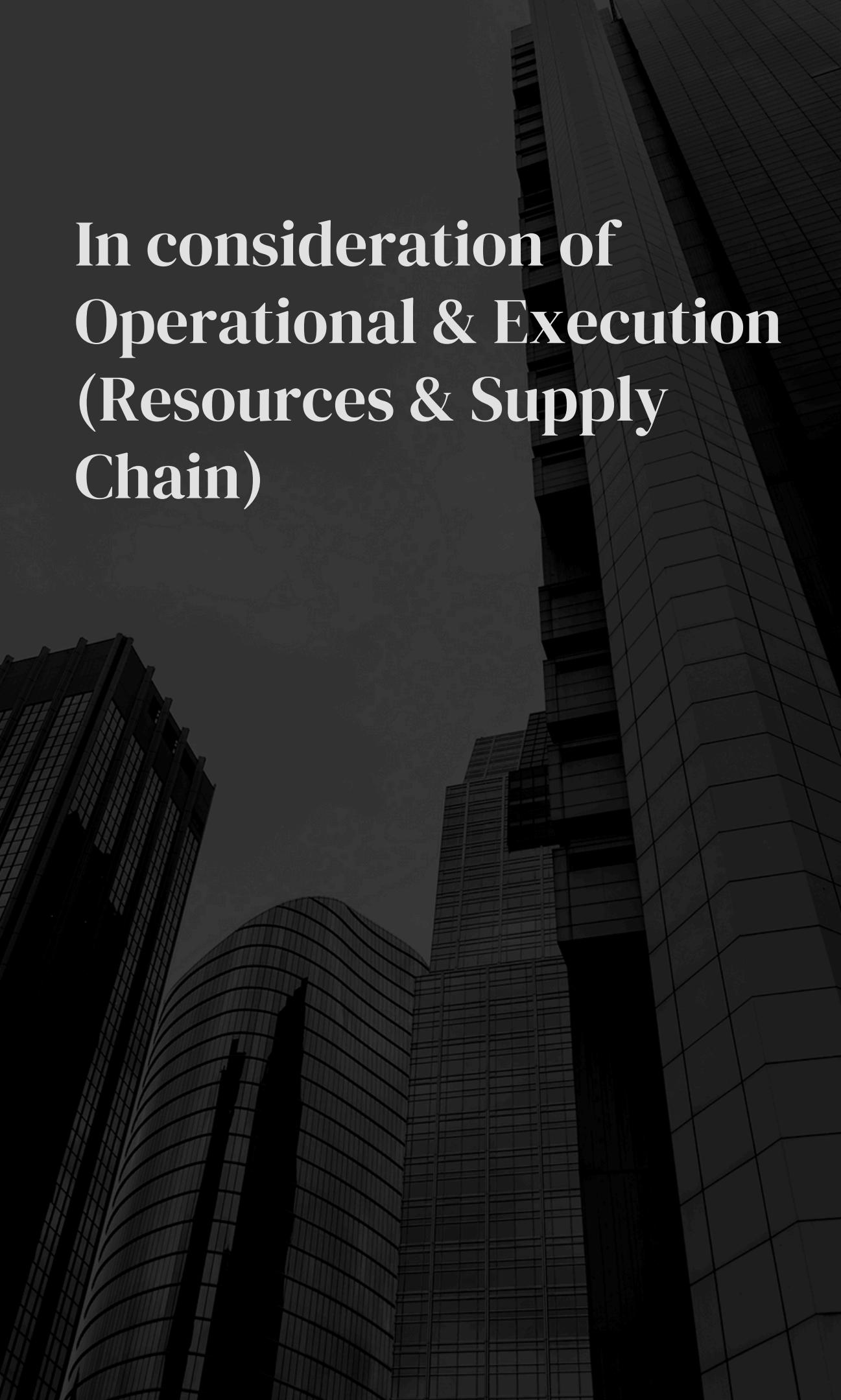
- Long-term offtake → stable cash flow
- Shared capex improves IRR vs pure Build
- Avoids full merchant PJM exposure

Market alignment

- Data centers: 415 TWh/yr globally; U.S. = 45% share
- Nearly half of U.S. capacity in 5 clusters; PJM/NoVA = epicenter
- AI firms already partnering to reopen nuclear & expand generation

Competitive advantage

- Co-located supply aligns reliability + sustainability
- Most repeatable model across DC hubs



In consideration of Operational & Execution (Resources & Supply Chain)

Build

Execution burden

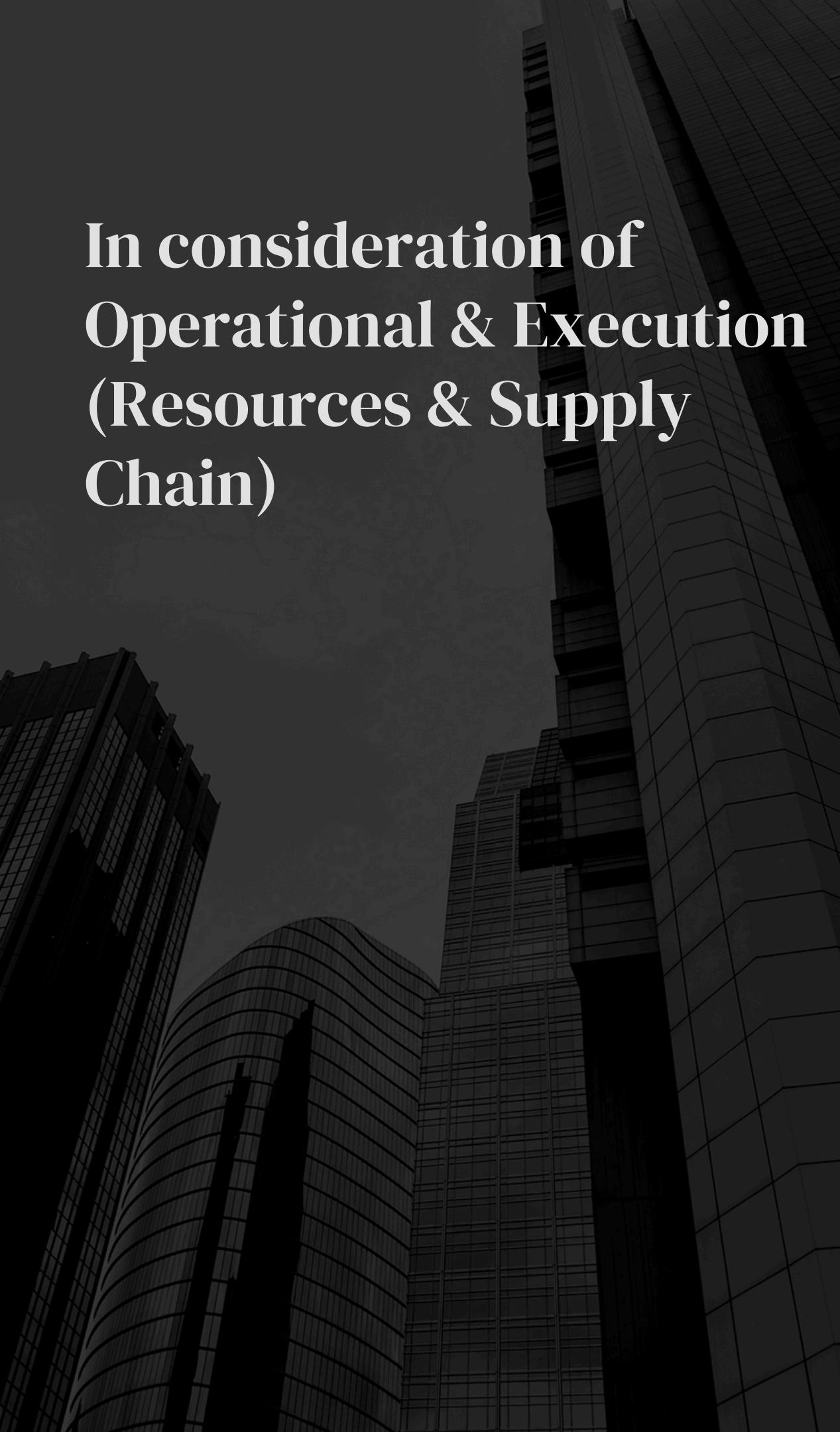
Industry-based build time: 24–30 months for CCGT construction

Cost exposure

- High upfront capex; interest carry throughout construction
- Full merchant risk until COD

Operational profile

- Mid-merit plant (~60% CF in Excel)
- Higher long-term carbon cost risk vs zero-carbon tech



In consideration of Operational & Execution (Resources & Supply Chain)

Buy

Asset quality uncertainty

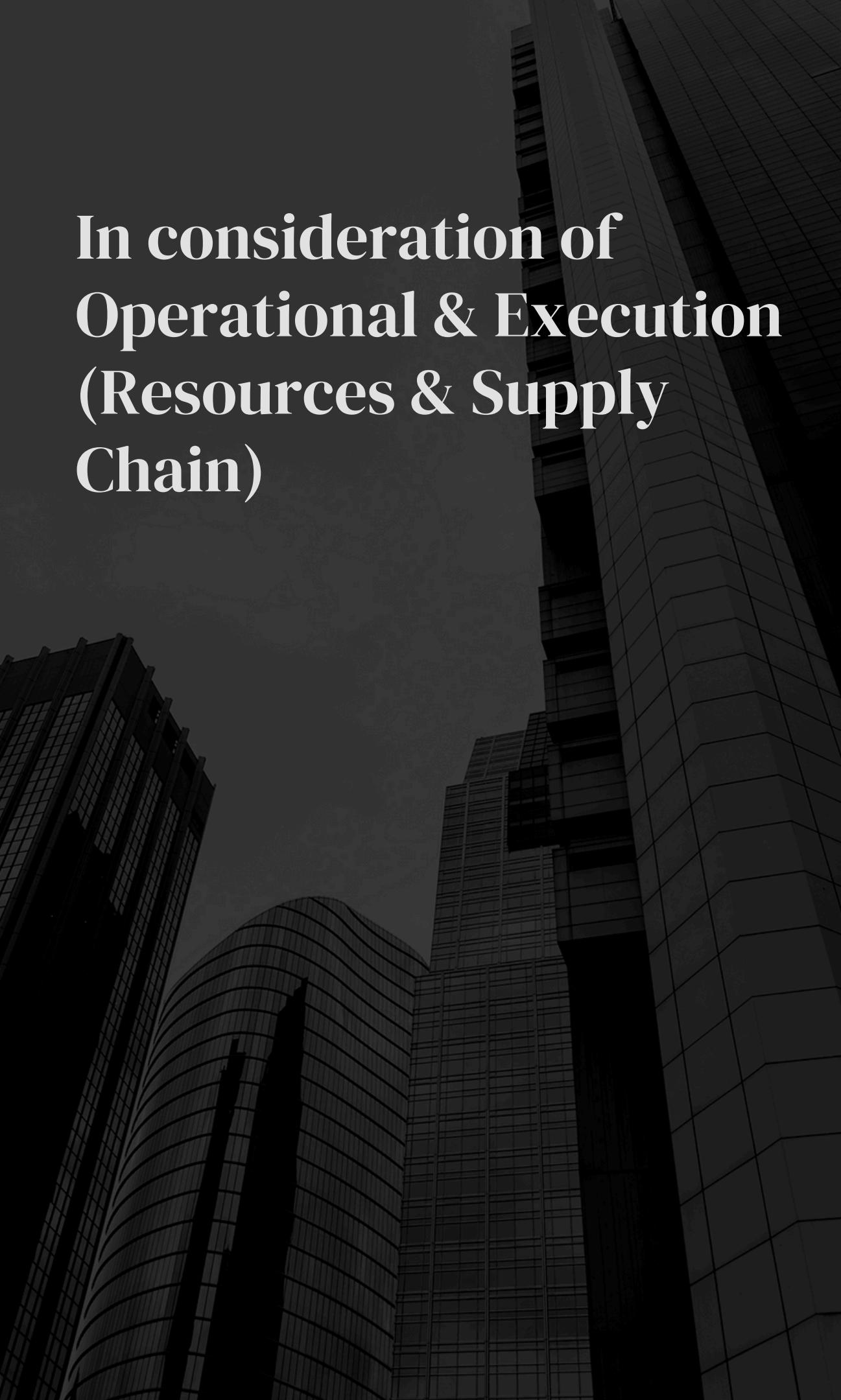
- Existing fleet in case shows mixed-age coal/gas/nuclear assets
- Older assets → higher forced outages + R&M capex

Market scarcity

- Nuclear = 18–20% of U.S. generation; growth mainly via life extensions, not new builds → limited availability
- Efficient CCGTs near load hubs competitively priced

Operational downside

- No design/siting control
- Full carbon exposure retained



In consideration of
Operational & Execution
(Resources & Supply
Chain)

Partner (Co-location)

Co-located asset profile

- 100–200 MW blocks sized to DC load (model-driven design)
- Behind-the-meter reduces interconnection delays (case allows behind/in-front of meter)

Execution & operations advantages

- Long-term contracts → predictable dispatch
- Smaller modular builds lower EPC exposure
- AI firms already structuring JVs with power producers

Complexity

- JV structure, shared capex, regulatory load
- Higher upfront coordination, lower long-term risk

How Partner can look like?

Goal

- 100–200 MW blocks sized to DC load (model-driven design)
- Behind-the-meter reduces interconnection delays (case allows behind/in-front of meter)

What SMU/NAPE Brings

- Expertise operating gas, solar, and nuclear assets
- Deliver firm dispatchable capacity, zero-carbon baseload, and clean energy

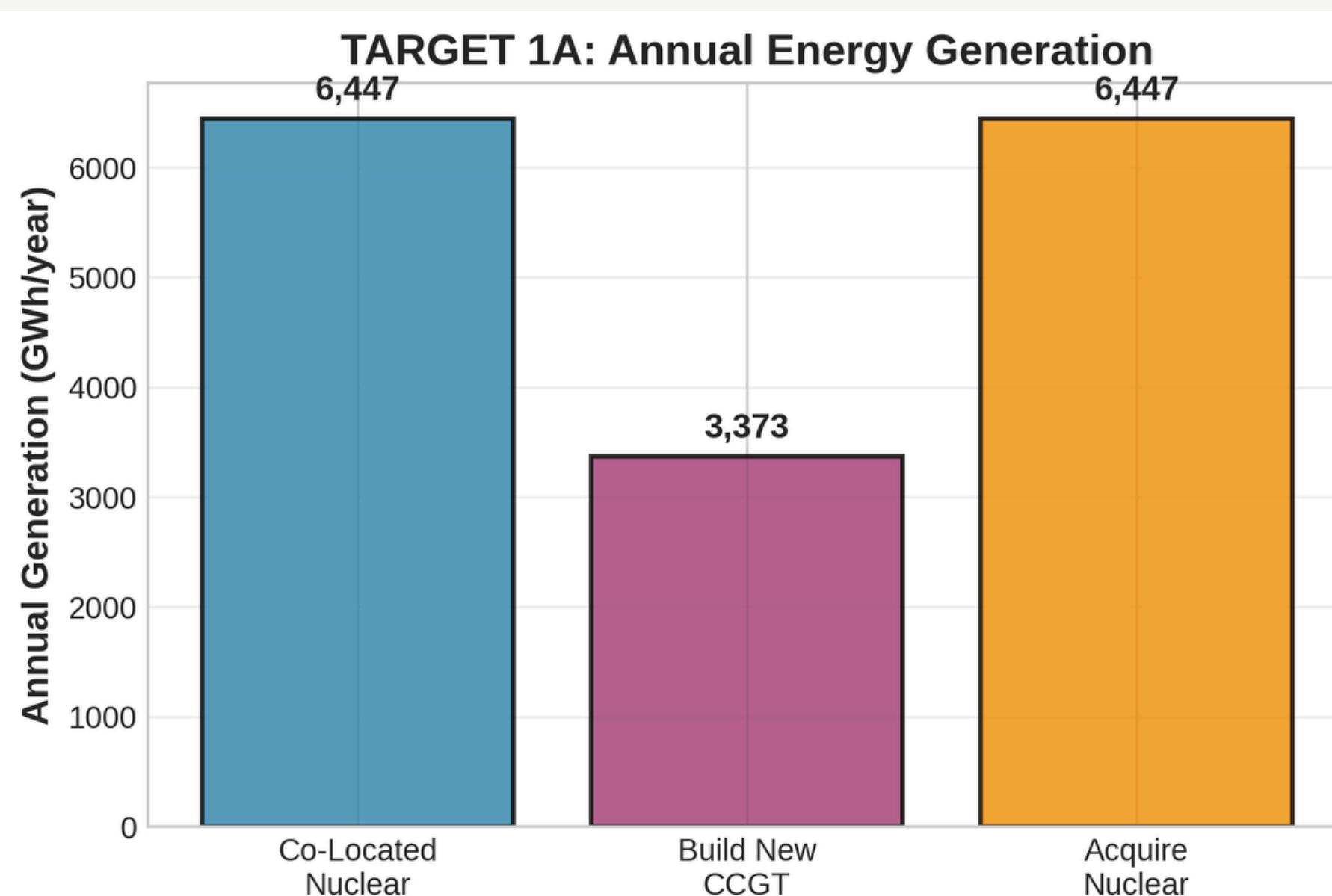
Illustrative Co-location Structure

- 150 MW CCGT + 50 MW Solar serving a single AI/hyperscale campus
- 15–20 year PPA with fixed or indexed pricing
- Cost-plus or regulated-like return structure
- Hyperscaler co-funds capex; SMU/NAPE owns & operates

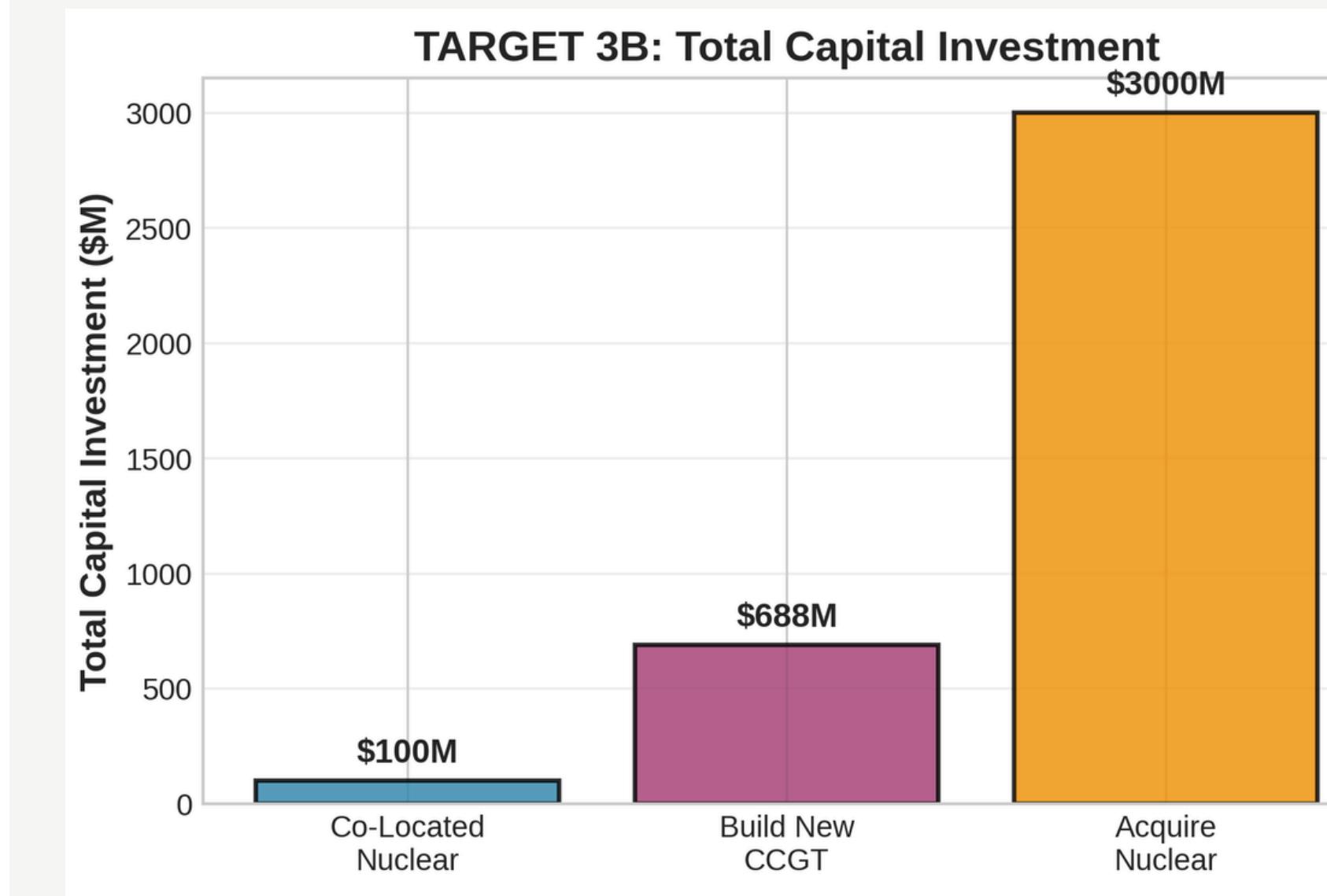
Vertical Suggestion

Our Forecast and Estimation

1. Annual Energy Generation



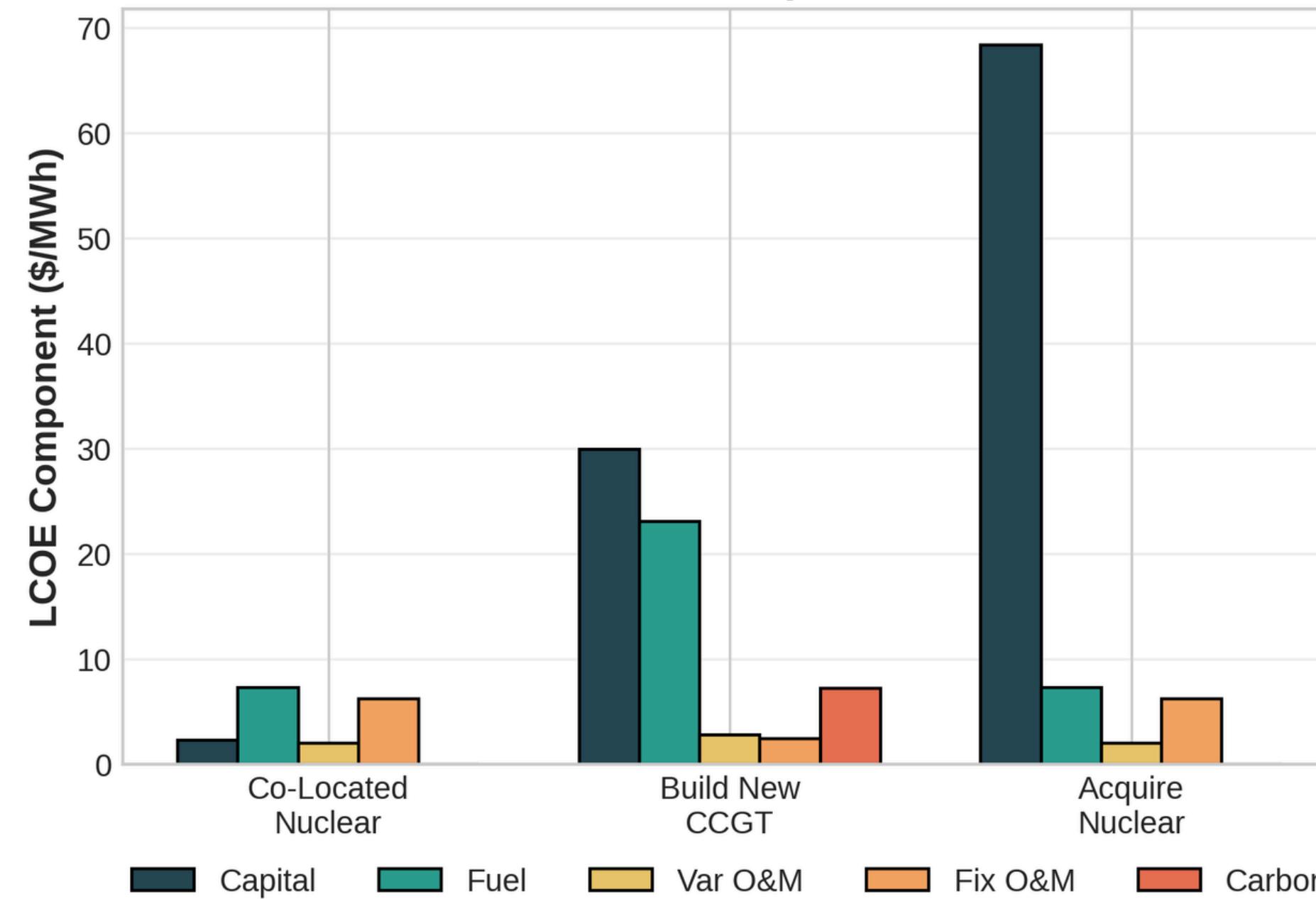
3. Total Capital Investment



Our Forecast and Estimation

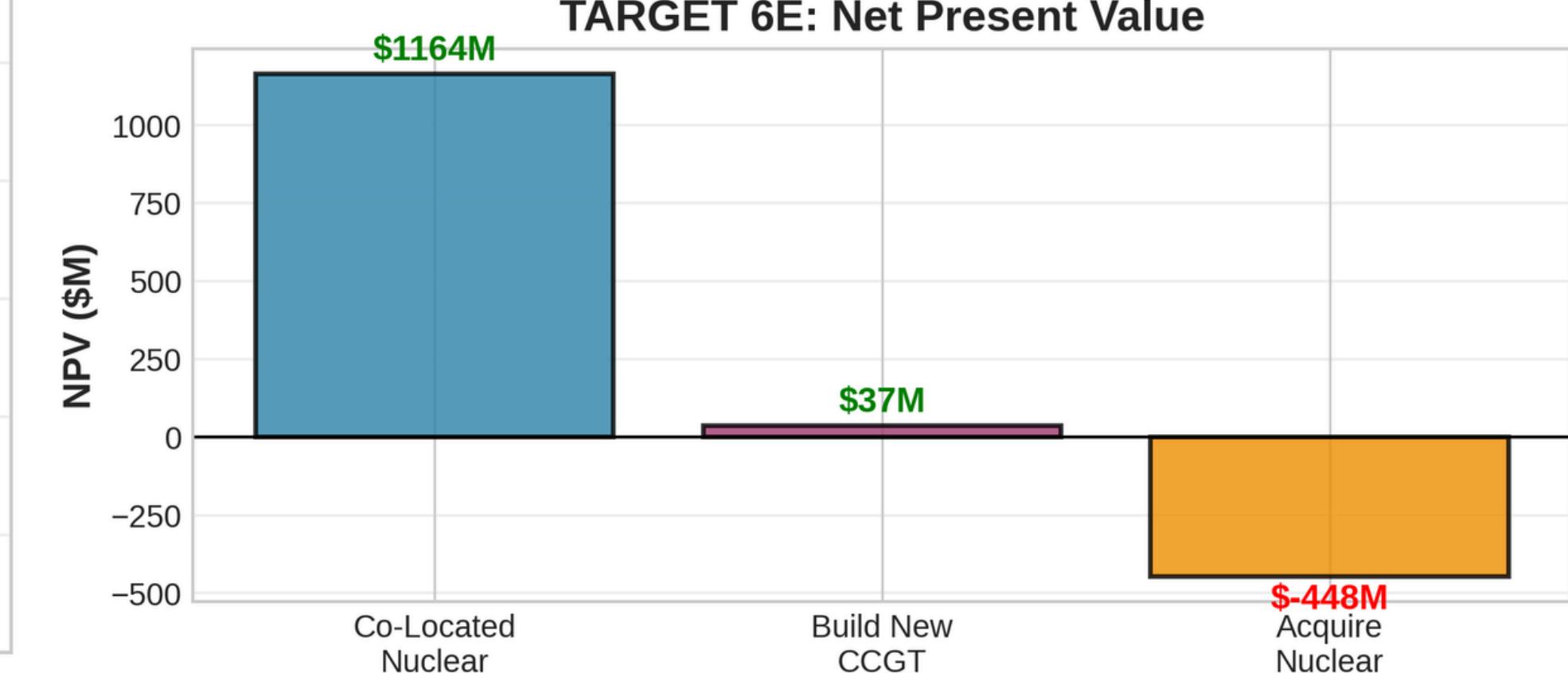
4. LCOE Component Breakdown

TARGET 5B: LCOE Component Breakdown

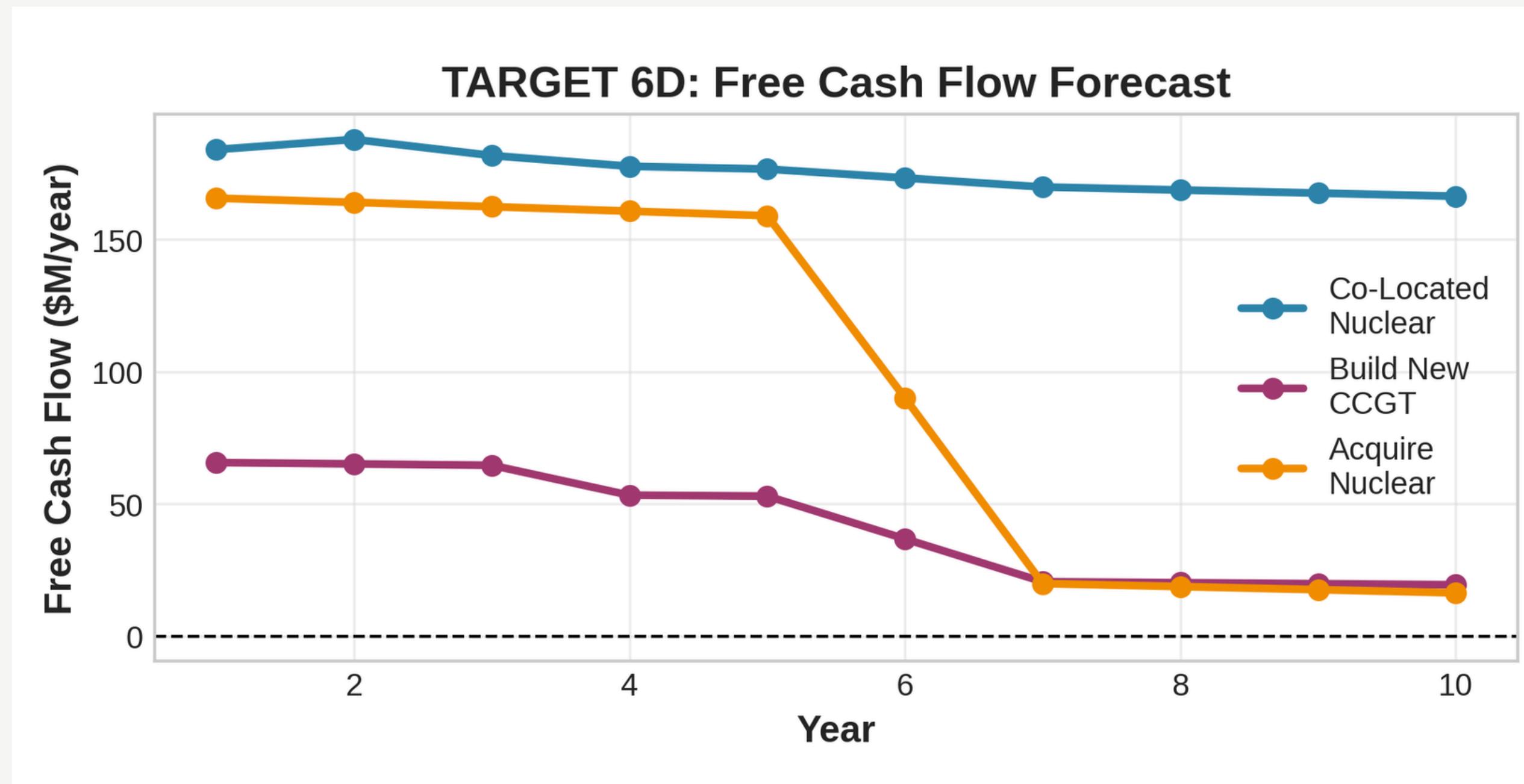


4. Net Present Value

TARGET 6E: Net Present Value

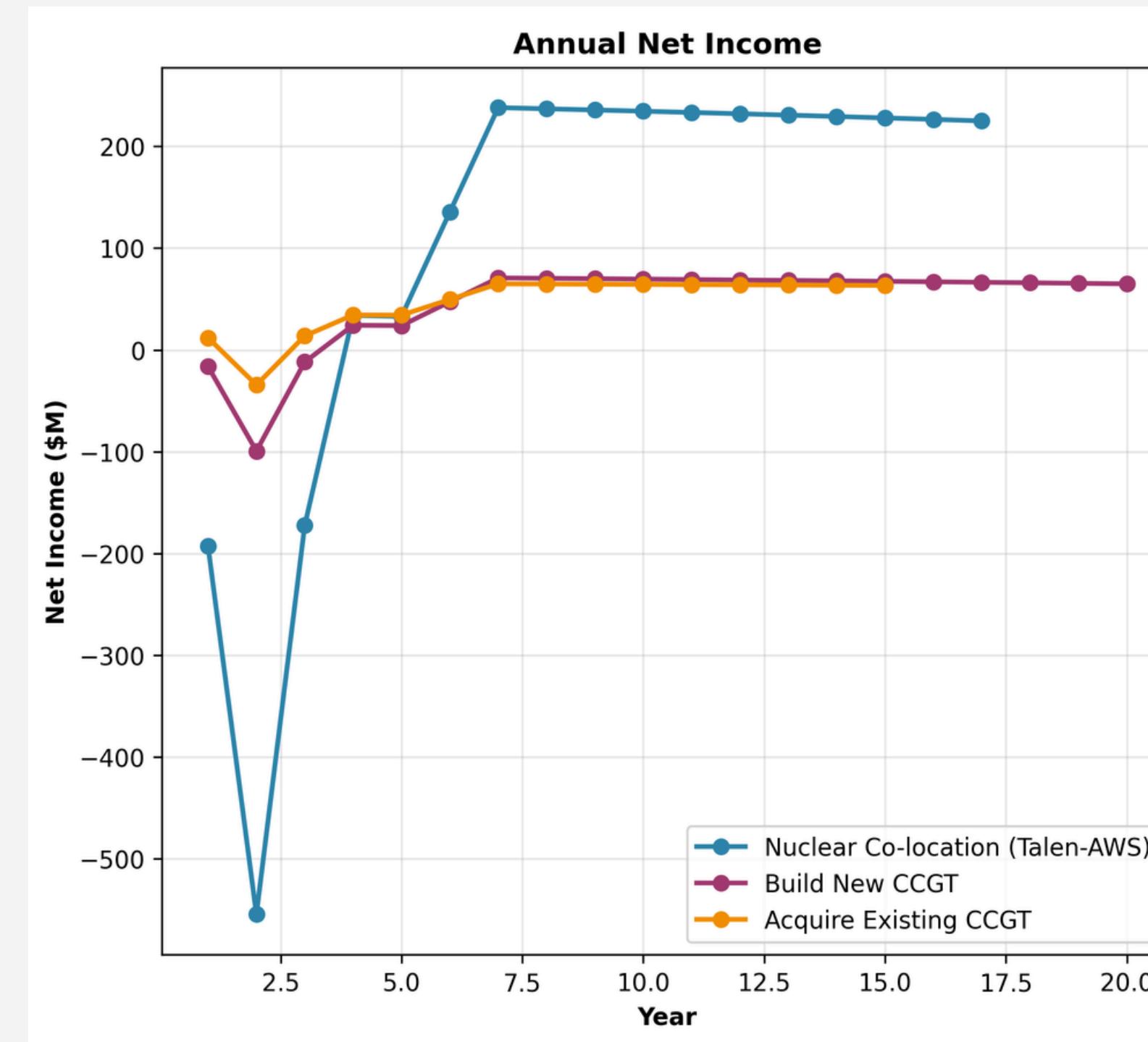


Our Forecast and Estimation



6. Free Cash Flow ForeCast

Our Forecast and Estimation



8. Net Profit after tax and Depreciation

Risk Assessment & Solution

Risk 1 - Dependence on a single data center partner

Solutions:

Diversify partners and global locations

Use strong SLAs with clear performance & exit terms

Risk 2 - Complex revenue sharing

Solutions:

Standardize contracts into simple, transparent pricing tiers

Implement automated revenue-management tools to apply formulas consistently

Risk Assessment & Solution

Risk 3 - Operational misalignment

Solutions:

Align teams through shared OKRs

Run recurring cross-functional leadership meetings to remove blockers early